

What is claimed is:

1. A method of casting an ophthalmic lens within a mold assembly, said assembly comprised of first and second mold portions, said first mold portion comprised of an amorphous material and having first and second opposing surfaces, said first surface comprised of a concave surface and said second surface comprising an optical lens-forming surface, said second mold having first and second opposing surfaces, said first surface comprising an optical lens-forming surface, said method comprising the steps of:

- a) charging said first surface of said second mold portion with a polymerizable monomer;
- b) assembling said mold portions such that said polymerizable monomer is sandwiched between said lens-forming surface of said first mold portion and said first surface of said second mold portion; and
- c) irradiating said mold assembly such that the pathway of said radiation passes through said cavity of said first mold portion;

whereby said pathway of said radiation is controlled such that said monomer is cast having a specific cure profile.

2. The method of claim 1, wherein said method comprises placing a liquid into the concave surface of said posterior mold.
3. The method of claim 1, wherein said method comprises controlling said concave surface of first mold portion.
4. The method of claim 1, wherein said method comprises placing an optical lens above said concave surface of said first mold portion.

5. The method of claim 1, wherein said method comprises placing an optical lens in said concave surface of said first mold portion.

~~6.~~ A method of casting an ophthalmic lens within a mold assembly, said assembly comprised of first and second mold portions, said first mold portion comprised of an amorphous material and having first and second opposing surfaces, said first surface comprised of a concave surface having a controlled radius of curvature and said second surface comprising an optical lens-forming surface, said second mold having first and second opposing surfaces, said first surface comprising an optical lens-forming surface, said method comprising the steps of:

a) charging said first surface of said second mold portion with a polymerizable monomer;

b) assembling said mold portions such that said polymerizable monomer is sandwiched between said lens-forming surface of said first mold portion and said first surface of said second mold portion; and

c) irradiating said mold assembly such that said radiation passes through said cavity of said first mold portion;

whereby said pathway of said irradiation is controlled such that said monomer is cast having a specific cure profile.

7. The method of claim 6 wherein said concave surface of said first surface of said first mold portion is spherical or aspherical.

8. The method of claim 6, wherein said first mold portion comprises polyvinyl chloride.

9. The method of claim 6, wherein said first mold portion comprises polystyrene.

10. The method of claim 6, wherein said molded article is a soft contact lens.
11. The method of claim 6, wherein said molded article is an intraocular lens.
12. The method of claim 6, wherein said molded article is a corneal onlay.
13. The method of claim 6, wherein said molded article is a corneal inlay.
14. A mold assembly comprising first and second mold portions, said first mold portion having first and second opposing surfaces, said first surface comprised of a concave surface having a controlled radius of curvature and said second surface comprising an optical lens-forming surface, said second mold having first and second opposing surfaces, said first surface comprising an optical lens-forming surface, wherein said mold portions matingly engage to form a lens forming cavity therebetween said second surface of said first mold and said first surface of said second mold.
15. The mold assembly of claim 14, wherein said first mold portion comprised of an amorphous material
16. The mold assembly of claim 14, wherein said amorphous material is polyvinyl chloride.
17. A method of casting an ophthalmic lens within a mold assembly, said assembly comprised of first and second mold portions, said first mold portion comprised of an amorphous material and having first and second opposing surfaces, said first surface comprised of a concave surface and said second surface comprising an optical lens-forming surface, said second mold having first and second opposing surfaces, said first surface comprising an optical lens-forming surface, said method comprising the steps of:
- a) charging said first surface of said second mold portion with a polymerizable monomer;

b) assembling said mold portions such that said polymerizable monomer is sandwiched between said lens-forming surface of said first mold portion and said first surface of said second mold portion;

c) filling said concave surface of said first mold portion with a liquid; and

d) irradiating said mold assembly such that said radiation passes through said liquid contained in said concave surface of said first mold portion;
whereby said pathway of said radiation is controlled such that said monomer is cast having a specific cure profile.

18. The method of claim 17, wherein said liquid has a refractive index not substantially different to said first mold portion.

19. The method of claim 17, wherein said liquid is water.

20. The method of claim 17, wherein said liquid is glycerin.

21. The method of claim 17, wherein said liquid is a mixture of water and glycerin.

22. A method of casting an ophthalmic lens within a mold assembly, said assembly comprised of first and second mold portions, said first mold portion comprised of an amorphous material and having first and second opposing surfaces, said first surface comprised of a concave surface and said second surface comprising an optical lens-forming surface, said second mold having first and second opposing surfaces, said first surface comprising an optical lens-forming surface, said method comprising the steps of:

a) charging said first surface of said second mold portion with a polymerizable monomer;

b) assembling said mold portions such that said polymerizable monomer is sandwiched between said lens-forming surface of said first mold portion and said first surface of said second mold portion;

c) placing a optical lens above said cavity of said first mold portion; and

d) irradiating said mold assembly such that said radiation path passes through said optical lens and said concave surface of said first mold portion; whereby said pathway of said radiation is controlled such that said monomer is cast having a specific cure profile.

23. The method of claim 22, wherein said radiation path is altered by said optical lens and said ophthalmic lens is exposed to similar amounts of radiation energy.

24. The method of claim 22, wherein said amorphous material is polyvinyl chloride.

25. The method of claim 22, wherein said optical lens is a positive lens.

26. The method of claim 25, wherein said optical lens is a plano convex lens.

27. The method of claim 22, wherein said irradiation path is altered by said optical lens and said ophthalmic lens is exposed to predetermined amounts of energy.

~~28.~~ A method of casting an ophthalmic lens within a mold assembly, said assembly comprised of first and second mold portions, said first mold portion comprised of an amorphous material and having first and second opposing surfaces, said first surface comprised of a concave surface and said second surface comprising an optical lens-forming surface, said second mold having first and second opposing surfaces, said first surface comprising an optical lens-forming surface, said method comprising the steps of:

a) charging said first surface of said second mold portion with a polymerizable monomer;

b) assembling said mold portions such that said polymerizable monomer is sandwiched between said lens-forming surface of said first mold portion and said first surface of said second mold portion;

c) placing a optical lens into said concave surface of said first mold portion;
and

d) irradiating said mold assembly such that said radiation path passes through said optical lens and said concave surface of said first mold portion;
whereby said pathway of said radiation is controlled such that said monomer is cast having a specific cure profile.

29. The method of claim 28, wherein said radiation path is altered by said optical lens and said ophthalmic lens is exposed to similar amounts of radiation energy.

30. The method of claim 28, wherein said optical lens comprises an amorphous material.

31. The method of claim 28, wherein said optical lens comprises a cyclic olefin.